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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,843	11/20/2003	Manoj Mehrotra	TI-29199.1	8561
23494	7590	09/16/2004	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED			DIAZ, JOSE R	
P O BOX 655474, M/S 3999			ART UNIT	
DALLAS, TX 75265			PAPER NUMBER	
			2815	

DATE MAILED: 09/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/717,843	Applicant(s) MEHROTRA ET AL.	
	Examiner José R. Díaz	Art Unit 2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/20/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 14-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Maeda et al. (US Pat. No. 6,424,010 B2).

Regarding claim 14, Maeda et al. teaches a transistor formed at a semiconductor surface of a substrate, comprising:

a gate electrode (9) extending along the surface for a length (see fig. 22A), the gate electrode (9) having at least one second section (9a) disposed between adjacent ones of the first sections (9) of the gate electrode (see fig. 22A), the at least one second section (9a) having a width that is narrower than the width of the adjacent ones of the first sections (9) of the gate electrode (see fig. 22C); and

source and drain doped regions (5a1 and 5b1) in the surface, and disposed on opposing sides of the gate electrode (see figs. 22A-22B).

With regards to the process limitations describing the method steps for forming the gate electrode, the limitations contains method of process of making characteristics;

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therefore given no patentable weight in determining patentability of the final device structure. Note that a "product by process" claim is directed to the product per se, no matter how actually made, *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessmann*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re Marosi et al*, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final product per se which must be determined in a "product by process" claim, and not the patentability of the process, and that an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Note that applicant has the burden of proof in such cases, as the above case law makes clear.

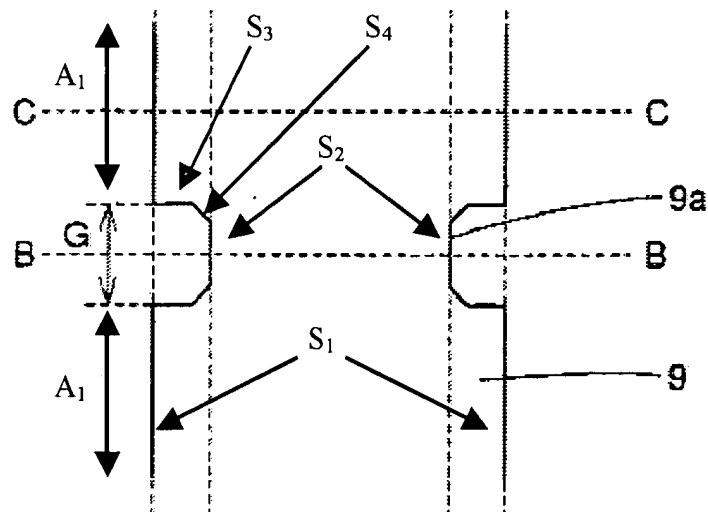
Regarding claims 15, the claimed limitation describing the elongated feature of the photoresist contain method of process of making characteristics, therefore given no patentable weight in determining patentability of the final device structure. See case law above.

Regarding claim 16, Maeda et al. teaches that the conductive material comprises polysilicon (see col. 10, lines 58-60).

Regarding claim 17, Maeda et al., as far as understood, teaches a device in which the length of the second section (G) is smaller than the length of the first section (A₁) (see figure 22A, below). In addition, the claimed limitations describing the elongated feature of the photoresist contain method of process of making

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characteristics, therefore given no patentable weight in determining patentability of the final device structure. See case law above.

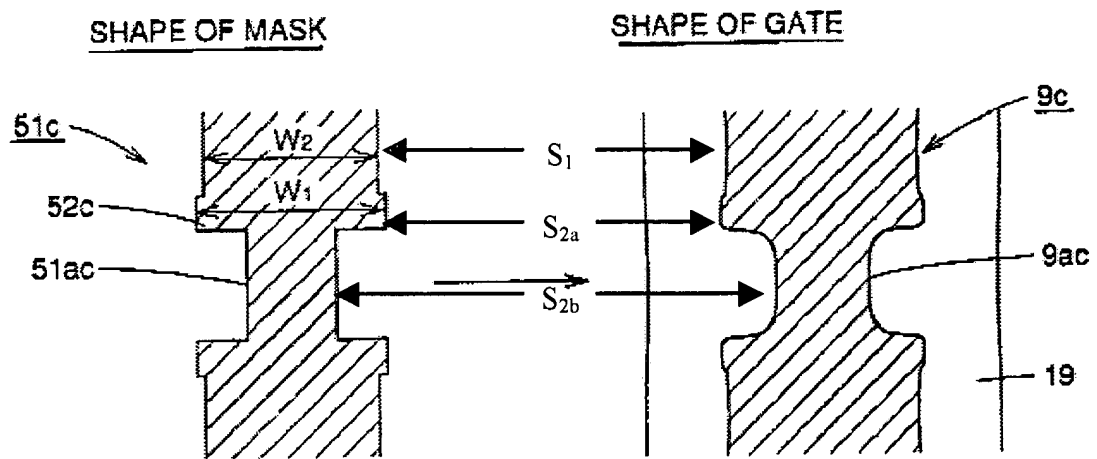
FIG. 22A

Regarding claim 18, Maeda et al., as far as understood, teaches that the sides of the second section (S_2) are parallel to the sides of the first sections (S_1), and a side (S_3) formed between first and second sections, which is substantially perpendicular to the sides of the first and second sections (S_1 and S_2) (see figure 22A, above). In addition, the claimed limitations describing the elongated feature of the photoresist contain method of process of making characteristics, therefore given no patentable weight in determining patentability of the final device structure. See case law above.

Regarding claims 19, 21 and 22, Maeda et al., as far as understood, teaches the sides (S_1 and S_{2a}) define substantially a straight-line segment (see fig. 28, below). In

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addition, the claimed limitations describing the elongated feature of the photoresist contain method of process of making characteristics, therefore given no patentable weight in determining patentability of the final device structure. See case law above.

FIG.28

Regarding claim 20, Maeda et al., as far as understood, teaches that the sides of the second section (S_2) and its adjacent ones of the first sections (S_1) are separated by slopping portions (S_3 and S_4) (see figure 22A, above). In addition, the claimed limitations describing the elongated feature of the photoresist contain method of process of making characteristics, therefore given no patentable weight in determining patentability of the final device structure. See case law above.

Regarding claims 23, Maeda et al., as far as understood, teaches that the opposing sides of the second section (S_2) and its adjacent ones of the first sections (S_1) are staggered relative to one another (please note the alternate sides configuration comprising a first side (S_1), a second side (S_{2a}) and a third side (S_{2b})). See figure 28,

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above). In addition, the claimed limitations describing the elongated feature of the photoresist contain method of process of making characteristics, therefore given no patentable weight in determining patentability of the final device structure. See case law above.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hsu et al. (US Pat. No. 6,144,081) discloses a gate having second length that is less than the first length (see abstract).

Correspondence

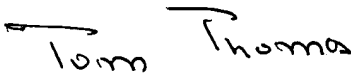
Any inquiry concerning this communication or earlier communications from the examiner should be directed to José R. Díaz whose telephone number is (571) 272-1727. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JRD
9/9/04


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